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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/721,264	11/21/2000	Daryl J. Pocker	SJO990197US1	3418
32112	7590	07/29/2004	EXAMINER	
INTELLECTUAL PROPERTY LAW OFFICE			PADGETT, MARIANNE L	
1901 S. BASCOM AVENUE, SUITE 660			ART UNIT	
CAMPBELL, CA 95008			PAPER NUMBER	

1762

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/721,264

Applicant(s)

Packer et al

Examiner

M. L. Padgett

Group Art Unit

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— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☒ Responsive to communication(s) filed on 3/11/04 + 4/2/04 + 6/21/04
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-29 is/are pending in the application.
- Of the above claim(s) 1-12 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 13-29 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
- ☐ Certified copies of the priority documents have been received in Application No. _____
- ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

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1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/11/04 has been entered.

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 13-29 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-26 of copending Application No. 10/611,240. Although the conflicting claims are not identical, they are not patentably distinct from each other because while all the limitations claimed in the (240) application are in the present application, they are claimed in different orders, such as that the independent claims of the copending (240) case are broader than those of the instant application, which are hence totally encompassed by those claims. Note for example that in claims 13, the (240) case does not clearly defined energy ranges, but the present application does have ones that are also consistent with those of (240), as well as the copending case subsequently claiming specific ranges in claims 14, 15, 17, etc.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. New art of interest include Vijayen et al (2003/015746 A1) teaching relevant deposition of DLC layer on magnetic media, but using C⁺ energies of 57-130eV (abstract, [0024]), thus lacking applicant's lower energies; and Kirkpatrick (6,660,340B1), who used significantly higher C ion energies (1-200 KeV) to implant.

5. Claims 13-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the

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relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

See section 2 of the 11/7/03 rejection, and the advisory action, section 2 for previous discussion of this rejection. On pages 11-12 of the 1/7/04 response, applicants cite pages 10 and 11 as having support for “at least one subsequent carbon ion beam energy of greater than approximately 50eV”, however the examiner did not find this entire range there. Page 11, lines 11-12 do teach “ion beam energy in excess of approximately 100 eV”, so only ≤ 100 eV is covered by this disclosure. Page 10, lines 18-23 and p. 11, lines 8-9 teach using [approximately] 10eV, then 50 eV, then 100 eV, but nowhere was any teaching to use energies between approximately 50 eV and approximately 100 eV found. Nor was there any teaching of achieving the desired effect of this application, by never using C ion beams at values of approximately 100eV or greater, as is included by this amended range. All disclosure using ~ 50 eV as one beam, also had a subsequent beam of ~ 100 eV. Nor does the specification provide for 100 eV followed by 50eV, which is also within the scope of the amended ranges. All multi step examples were limited to using successively higher energies. Therefore, while the claims as written encompass the disclosure in the specification, they are broader than the scope of the original enabling disclosure, hence contain New Matter.

6. Claims 13-17 and 20-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Falabella (5,763,087), in view of Ueda et al (5,776,602), and optionally Schmidt et al. (5,750,210), as discussed/applied in section #4 of paper #9 (3/31/03) and in section 4 of the action mailed 11/7/03.

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As noted the advisory action, the steps in claim 13 do not restrict the extent of the penetration in a determinable manner, without outside information, and while claim 22 only requires implanting already deposited DLC in the initial thickness, this would have been expected from Falabella's col. 5, Ex. 3 teachings combined with Schmidt et al (previously discussed). In these claims as written, whether or not the subsequent C⁺ ions penetrate thru the initial deposit and implant the substrate, is not an issue.

7. Applicant's arguments filed 1/7/04 and discussed above have been fully considered but they are not persuasive.

Applicant's p. 13 arguments concerning the thickness in claim 18, with respect to the energy levels of the ions subsequently treating them, have been further reviewed, and when also considering disclosure, such as on p. 11, lines 13-21 of the specification, it is agreed that the combination of energies, plus thickness for 3 sublayers, does provide patentable significant.

Claims 18-19, if the obviousness double patenting is overcome, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 27-29 would also be allowable as indicated in the advisory, if the obviousness double patenting rejection is overcome.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M L. Padgett whose telephone number is (571) 272-1425. The examiner can normally be reached on Monday-Friday from about 8:30 am to 4:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. L. Padgett/af

July 8, 2004

July 27, 2004

A handwritten signature in black ink, appearing to read "Marianne Padgett", with a stylized flourish extending from the end.

**MARIANNE PADGETT
PRIMARY EXAMINER**